

**SECRET**

25X1A

OC   
Savings Through the Use of Computers1. Personnel Savings:

Activation of MAX-II permitted a reduction of five positions below the level previously required to operate a manual torn tape relay facility. These positions, however, were shifted to the Facilities Control area where functions increased with the addition of circuitry and installation of new communications systems. Additionally, eleven circuits which were previously operated manually in the Project Terminal Facility and Special Activities Facility were also reterminated in MAX, freeing personnel devoted to these manual functions for other duties. Since these changes were not full time functions in either facility (PTF or SAF), no personnel reduction was possible; however, the personnel time previously committed to these functions is being used for other purposes in the message preparation, dissemination, and technical control fields, thus virtually eliminating both overtime and the need to request an increase in the T/O to provide adequate coverage in these areas.

2. Assumption of Heavier Workload:

The MAX Facility, working with a smaller personnel complement, is performing the relay function for 11 circuits beyond those which were handled in the old manual torn tape relay facility. Further, the capability exists in the MAX II repertoire to further increase circuit termination by more than 50% (together with a comparable increase in traffic volumes) but with significantly smaller increases in personnel complements, e.g., probably not more than 10-15% for the relay function.

3. Things We Would Otherwise be Unable to Do:

a. The generation of error reports denoting on a circuit-by-circuit basis the number of messages requiring human corrective action due to errors in preparation by connected stations/terminals permits timely corrective action to be taken in reducing the percentage of error, resulting in an increase in the operating efficiency of the network.

b. An increase in the security of message handling on a need-to-know basis in that the normal message need not be viewed by anyone during the relay process.

c. Almost complete elimination of message backlogs in the relay process, thereby significantly reducing the time loss in message handling for the relay process.

d. The possibility of missent messages has been virtually eliminated.

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e. Permits the effective utilization of high-speed transmission paths (a technique which was not practicable with manual operation), improving the economy of operation by reduction of cryptographic equipment and terminal gear.

f. Circuit and volume statistics for any given period of time, which previously had to be accumulated manually, are now generated automatically on request.

g. The amount of paper tape in use in the Signal Center is significantly reduced, with the attendant reduction in the storage and burn requirement as well as a possible fire hazard.

h. Eliminates the costly and time-consuming error factor resulting from the inevitable percentage of mis-handled messages in a manual torn tape relay process.

Attachment:

MAX I, II & III Savings

Category A-B-C

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25X1 Attachment to OC [ ] Paper

## Savings Through the Use of Computers

### MAX-I

25X1 The installation of MAX-I [ ] in FY-1965 permitted the  
25X1 handling of a 50% increase in the traffic work load by FY-1969 without  
25X1 the need for additional personnel. Using FY-1965 (pre-MAX) productivity  
25X1 factors per man, the traffic increase represents the equivalent of approx-  
25X1 imately [ ] more personnel. Since no personnel were added, the figure of  
25X1A [ ] positions can be regarded as savings attributable to the automation of  
25X9 the facility. During the past two years BALPA and OPRED reductions taken  
from the [ ] has reduced the overall strength from [ ]  
authorized in 1966 to [ ] currently authorized for FY-1970. The combined  
traffic increases and the personnel reductions could not have been handled  
without the computer. (Category A-B-C)

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25X9

### MAX-II

25X1 These computer-based, processor-controlled, store-and-forward switch-  
ing and relay systems perform functions related to inter-station message  
communication traffic. MAX-II is located in and serves the Headquarters  
complex. (See [ ] for savings or work benefits.) MAX II is programmed  
and connected for mutual contingency support. (Category A-B-C)

### MAX-III

1. MAX-III is located at [ ]  
MAX-III is programmed and connected with MAX-II for mutual contingency support.  
On this basis, if MAX-III were to experience failure, MAX-II would take over  
MAX-III's work and process the traffic.

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2. The Computer Message Switching System has increased the capacity of  
the Relay Station to operate a greater number of circuits with increased  
volumes without additional manpower. The system has the capacity to cope  
with the message relay workload more efficiently with improved service to the  
respective tributary stations. The flow of traffic to the tributary is even  
and the traffic is transmitted in order of precedence on a first-in/first-out  
basis. Additionally, the tributary station has a limited ability of being  
self-served, i.e., the tributary operator can directly interrogate the proces-  
sor and receive message re-runs automatically; can start/stop flow of traffic  
to himself as his individual needs dictate.

3. Although manpower at the relay has not been reduced, the switch per-  
mits management to assign (1) additional operating personnel to control  
positions--thus directly improving service to the customer, and (2) personnel  
to training in new clandestine and staff equipment and techniques.  
(Category A-B-C)

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GROUP 1  
Excluded from automatic  
downgrading and  
declassification